



ESOGÜ Electrical-Electronics Engineering Department

COURSE CODE: 151226378 - 151246378

COURSE TITLE: Creative Problem

Solving Techniques

Semester	Weekly Hours		COURSE				
	Theoretical	Practical	Credits	ECTS	Type	Language	
6	3	0	3	4	Compulsory () Elective (✓)	Turkish () English (X)	
Write the credit (for non-credit courses weekly hours) below (If necessary distribute the credits.).							
Math and Basic Science		Electrical Engineering [mark (✓) if there is high design content]		General Education		Humanities	
		()				✓	
Assessment		THEORETICAL-PRACTICAL COURSES			LABORATORY COURSES		
		Type	Number	%	Activity Type	Number	%
Midterm		Midterm	1	30	Quiz		
		Quiz			Lab performance		
		Homework	1	20	Report		
		Project			Oral exam		
		Other (.....)			Other (.....)		
Final			1	50			
Makeup exam (Oral/Written)							
Prerequisites		none					
Brief content of the course		Innovation and creativity; Creative problem solving process; Creative techniques for analyzing the environment, recognizing, defining and making assumptions; Group techniques for producing options; Creative techniques for selecting, implementing and controlling options; Using creative techniques.					
Objectives of the course		To provide creative problem solving skills to engineering students					
Contribution of the course towards professional education		To ensure that engineering students develop a systematic approach to all kinds of problems and solutions to be encountered in their professional lives and improve their problem solving performance; To learn the understanding of in-house learning sprawl					
Outcomes of the course		1- Students define and explain the problem; 2- Divide the problem into pieces; 3. identify the objectives of the solution of the problem; 4. Analyze root cause; 5. Develops measures to solve the problem; 6- Implement the measures; 7 - confirm the results; 8- Standardize the solution and ensure that the learning is shared. 9- Different techniques throughout the process is learned.					
Textbook of the course		Higgins, James M. (1994), 101 Creative Problem Solving Techniques, New Management Publishing Company, USA					
Other reference books		Proctor, Tony (2014); Creative Problem Solving for Managers, Routledge, UK Altshuller, Genruch (2013), Ve Birden Mucit Ortaya Çıkarıldı - Yaratıcı Problem Çözme Teorisi, Elma Yayınevi					
Required material for the course		Computer, projection device, presentation software, white board					

WEEKLY PLAN OF THE COURSE	
Week	Topics
1	Innovation and creativity
2	Creative problem solving process
3	Creative problem solving process
4	Creative techniques for analyzing the environment, recognizing & identifying problems, and making assumptions
5	Creative techniques for analyzing the environment, recognizing & identifying problems, and making assumptions
6	Case study
7	Case study
8	Mid-Term Examination
9	Mid-Term Examination
10	Group techniques for generating alternatives
11	Creative techniques for choosing among the alternatives, implementation, and control
12	Using creative techniques
13	Case study
14	Case study
15,16	Final Exam

NO	OUTCOMES OF THE PROGRAMME	4	3	2	1
1	Adequate knowledge of mathematics, science and Electrical and Electronic Engineering; ability to practice theoretical and practical knowledge of these areas into modeling and solving problems of Electrical and Electronic Engineering	X			
2	Ability to identify complex engineering problems in Electrical and Electronic Engineering and related fields, for this purpose having skills to formulate, select and apply appropriate methods.	X			
3	Having skills to apply modern design methods to design a complex system, equipment or product that should work under realistic conditions and constraints and satisfy specific requirements concerning the Electrical and Electronic Engineering.				X
4	Having skills to develop, select and apply modern techniques and tools needed for Electrical and Electronic Engineering applications, skills to use information technology effectively.				X
5	Skills to design and conduct tests, collect data, analyze results, and interpret data for the experimental investigation of Electrical and Electronic Engineering problems	X			
6	Ability to function effectively as an individual and as a member of teams within the discipline and in multidiscipline areas.	X			
7	Communicating effectively in oral and written form both in Turkish and English.				X
8	Awareness of the necessity of lifelong learning, access to information, monitoring developments in science and technology and the ability to self-renewing				X
9	Understanding of professional and ethical responsibility				X
10	Information on project management, change management and risk management practices, awareness on entrepreneurship, innovation and sustainable development.				X
11	Information about universal and societal effects of engineering applications on health, safety and environment; awareness of the legal consequences of engineering solutions.				X

Scale for assessing the contribution of the course to the program outcomes:

4: Very high

3: Medium

2: Low

1: None

Name of Instructor(s):

Gürcan Banger

Signature(s):

Date: